

In Patent Application Serial No. 09/944,923
Filed August 31, 2001

DECLARATION OF JAMES OWEN

I, James Owen, hereby declare as follows:

1. My residence address is 4814 NW 139th Loop, Vancouver, WA 98685.
2. Since January 1, 1998, I have been employed by Sharp Laboratories of America (SLA), Inc., 5750 N.W. Pacific Rim Boulevard, Camas, Washington 98607. My title is Principal Engineer. My responsibilities include Technical lead for various projects involving MFP and Printer Driver code, Technical advisor on multiple projects involving computer software User interfaces, Color conversions for printing, and Printing. I'm also responsible for generating IP to protect Sharp's inventions in the area of printing and MFPs.
3. My educational background includes a Masters degree in Electrical Engineering from the University of Santa Barbara, CA.
4. Prior to my employment with SLA, I worked at JetFax where I implemented printing software for MFPs, and Mission Research Corporation where I worked on computer simulations of Satellite communications for predicting performance of new designs in different environments.
5. I have read the claims and relevant portions of the specification for the patent application at issue, Serial No. 09/944,923, entitled "System and Method for Allocating Random Access Memory in a Multifunctional Peripheral Device", invented by Roy Chrisop. I have also read the Office Action of April 20, 2006, where the Applicant's claims have been rejected as obvious. I have read the relevant sections from the three cited prior art references: Asai, AuClair, and Bitar.

5. It is my opinion as a person of skill in the field of scanning and printing imaging device driver software, that the three prior art references do not make the Applicant's claims obvious. There are key features in the Applicant's independent claims (claims 1, 14, and 26), which are not particularly described in any of the prior art references. Further, there is no discussion in the prior art references to lead an expert such as myself to think of these unspecified limitations. In fact, there is no discussion in these references to lead an expert to think that the Applicant's limitations might even be desirable.

6. Asai describes a single-function fax device, such as may have been common in the workplace 15 years ago, or common in the home 10 years ago. Asai's fax device performs the functions of scanning a document, so that it can be sent to a destination, printing a faxed document received from a destination, and copying. All of these functions require the use of a temporary memory.

Asai refers to the ability to create a hardcopy of a received fax, or to copying as a "printer" function. While this definition of printer may be correct in the most literal sense, it is critical for this discussion to understand that Asai does not describe a modern multifunctional peripheral device that communicates and saves documents in a higher level page description language (PDL). Asai does not describe a modern printer device that can be interfaced to a server or PC, receive a document in a PDL, and convert the document from the document language to a bitmap prior to creating a hardcopy.

Asai scans a document and creates a bitmap. If the device is being used as a copier, the bitmap is printed. If the device is being as a fax, the bitmap is transmitted. Either way, the bitmap is temporarily stored in memory.

7. AuClair is primarily concerned with allocating memory on the basis of history and document source. The Examiner has emphasized a feature of AuClair that describes the storage of font information in the form of bitmaps (column 7). AuClair states that the fonts are stored as bitmaps so as to skip the rasterization process, which converts the font information from a document language into a bitmap. AuClair admits that the fonts are stored in the bit-intensive bitmap format to promote rapid printing. It should be noted that the bitmap format is independent of printer language, as all document formats are converted into a common form of data – the bitmap. Thus, AuClair's treatment of fonts is exactly the opposite of what is asserted by the Examiner. Rather than being evidence that information is being stored by document type, the storage of fonts as bitmap data shows that the various printer languages recognized by the printer are converted and stored as a common bitmap format.

8. To put the Asai and AuClair disclosures in context, I will present a short summary of bitmap images, document formats (printer languages), and difference between the two.

A bitmap or raster image is a data file that represents an image, either a picture or a text document, as a collection of pixels. Raw pixel data is supplied to a print engine to create a hardcopy document, or to a monitor device to create a video image. An image is created on paper as a collection of pixels having height, width, and color. As the print engine "scans" across a piece of paper, the bitmap data gives directions to the print engine for marking each pixel. A bitmap file is memory-intensive because the file includes instructions for marking every pixel.

A page description language (PDL) is a higher level language that is used by conventional printers to minimize the communications (the number of bytes) needed to send a text document from a server or PC to a printer, and to minimize the amount of memory needed to store a text document prior to printing. Unlike a bitmap, which describes every pixel of an image, a PDL is typically object oriented. An object oriented language can reduce the number bytes by representing an image as a collection of objects, such as circle or a line, instead of as individual pixels. There are several types of PDLs, and they are usually associated with different document formats, such as PostScript, PDF, and printer control language (PCL). While PDLs advantageously minimize the communication bandwidth of documents being sent to a printer, and minimize storage requirements, a document in a format such as PostScript must be converted to a bitmap when the document is sent to the print engine.

8. I do not believe that the combination of the Asai and AuClair references makes the Applicant's invention obvious. As noted above, Asai is able to partition a memory on the basis of copier and fax functions. But the information stored by Asai is bitmap data. AuClair teaches nothing on the subject of allocating memory on the basis of document format, and his treatment of fonts actually teaches balancing the memory allocations based on font usage regardless of the document format. The combination of the two references may, perhaps, suggest a modification associated with partitioning bitmap data. However, the combination does not suggest to a person of skill in the art, that the Asai invention can be modified into one that allocates memory on the basis of document format.

9. With respect to claim 22, it is clear that Asai does not allocate memory on the basis of document format. Even if the rebooting of systems is well known, this feature in combination with Asai would not make obvious the Applicant's ability to allocate a percentage of memory for different document formats, as described in claim 14.

10. With respect to claim 23, the combination of Bitar's batch job allocations with Asai does not make obvious a system that allocates a percentage of memory on the basis of document format.

11. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful, false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: July 19/06

Signed: James S. Owen
James Owen